



43th EDITION | 2024









Argentine technology and innovation



PROCESSING MACHINERY OF FOOD





INSTITUTIONAL RELATIONS AND COMUNICATIONS OPERATIONAL MANAGEMENT











Processing machinery of food

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Editorial



The Argentine metal-mechanics sector is a crucial link for the development of the food and beverage industry, which accounts for 40% of the country's exports. Its ability to supply high-quality machinery and equipment is fundamental for enhancing the competitiveness and productivity of Argentine agribusinesses, both domestically and internationally.





The National Institute of Industrial Technology (INTI) plays a pivotal role in this context. With a broad array of services, including materials analysis and component certification, it meets the industry's ongoing demand for innovation and continuous improvement. However, the real challenge is to strengthen the sector's export capacity, positioning Argentina as a supplier of high-value goods in the regional agroindustrial sphere.

In Mendoza province, more than 300 SMEs with a well-established presence in the comprehensive processing of food and beverages stand out in the region. The Center - INTI Mendoza, part of INTI's Cuyo region, reinforces this trend by providing advanced technological services that enhance the competitiveness of metal-mechanics companies and bolster their position in the industry.

It is undeniable that the Argentine metal-mechanics industry holds a strategic position in the national economy. Its success relies not only on the quality of its products but also on its capacity to innovate and adapt to future challenges. With the support of institutions like INTI and the commitment of new generations of industrialists, this sector is poised to drive the growth of agribusiness, promoting an exportable supply of high-value goods that can transform the country's economic outlook.

Juan Carlos Najul

Director of INTI Industries Cuyo Region









Automation and Sustainability: A Key Pairing in the Food Industry



The food and beverage processing machinery industry is crucial to the global economy, facilitating the efficient and safe production of products that reach millions of consumers worldwide. The adoption of advanced technologies, such as automation and the Internet of Things (IoT), has transformed this sector by improving production processes and reducing human error. These innovations not only lower costs and production times but also ensure high standards of quality and food safety while promoting sustainability.

In Argentina, De Blasi Maquinaria Agroindustrial S.A. is a leading company in the design, manufacture, and marketing of cutting-edge machinery for the agro-industrial sector. The company offers complete lines for processing nuts, fruits, and vegetables for canning. To guarantee durability and compliance with sanitary standards, De Blasi uses stainless steel.

Unlike other SMEs in the sector, De Blasi has an integrated area that spans engineering development, manufacturing, and after-sales services, allowing them to provide efficient and customized solutions.



INSTITUTO NACIONAL DE TECNOLOGÍA INDUSTRIAL



The company's offerings include a wide range of specialized equipment, such as solutions for receiving and storage; conveying and elevating; washing, sorting, and grading; coring and cutting; milling and pulping; peeling, concentrating, and candying; dehydrating and pasteurizing. Additionally, they provide advanced packaging and palletizing systems.

For over four decades, De Blasi has maintained a strong relationship with the National Institute of Industrial Technology (INTI), an alliance crucial for its development and growth. Cristian Ciurletti, head of INTI's Agro-industrial Value Chains department in Cuyo region, emphasizes that "De Blasi has sought INTI's technical assistance since its inception". He adds that "the collaboration has included the preparation of technical reports to validate equipment shipments abroad, laboratory tests, and pilot tests of prototypes to ensure compliance with quality standards both in the local market and for export. INTI has also advised on obtaining the temporary import certificate (CTIT) for inputs in the metal-mechanic industry and facilitated contacts with potential customers, connecting users with the sector at national and international levels".

Victoria Di Cesare, responsible for Industrial Design and Industry 4.0 at INTI's Mendoza center, mentioned that a design diagnosis revealed multiple opportunities for improvement. Based on this, assistance continued with the standardization of equipment to optimize its commercialization and reduce quotation and production times. This support utilized design thinking tools to enhance innovation.

"INTI's collaboration has been key in increasing our production capacity and the quality of our offerings. Their support has allowed us to optimize processes, boost efficiency, and reduce costs, in addition to certifying our products for acceptance in international markets", mentions company president David De Blasi.

With extensive experience in exporting to nearly all countries in America, as well as Spain, Italy, and Australia, the company aims to strengthen its presence in North America, Mexico, and Europe. Their goal is to position their solutions for processing pistachios, almonds, and production lines for fruit preserves and jams. The similarity between the preserves produced in these regions and those that can be made with their equipment has generated growing demand, prompting the company to expand its international reach.

"Our strength lies in adding value through applied engineering and highly qualified processes. With nearly five decades of experience, we have established ourselves as a symbol of quality and excellence", says De Blasi.





De Blasi Agroindustrial Machinery S.A.

Maipú, Mendoza. Argentina

Manufacture of customized machinery for the industrialization of food and beverages.

- -Production plant: 2,710 m²
- -Annual production capacity: 320 units

• HS Code (NCM):

- -84.28.32.00 / Elevator with hopper
- -84.28.39.20 / Conveyor with rollers
- -84.33.60.90 / Rotary washing machine
- -84.28.33.00 / Sorting/cutting/inspection belt
- -84.38.60.00 / Cutter
- -84.33.60.10 / Fruit sizing machine
- -84.79.82.90 / Crushing mill for fruits
- -84.19.89.40 / Vacuum fast concentrator
- -84.19.81.90 / Jam stove for jam
- -84.19.31.00 / Universal dehydrator oven for vegetable products
- -84.22.30.21 / Packaging-sealing machine
- -84.22.30.29 / Piston packing machine/dosing machine
- -84.22.30.10 / Dosing tank
- -84.19.81.10 / Static vertical sterilizer autoclave
- -84.28.39.90 / Bottle depalletizer
- -84.33.60.90 / Pistachio destemmer
- -84.28.39.90 / Elevator with inlet hopper and distribution hopper
- -84.38.60.00 / Pistachio peeling machine
- -84.33.60.10 / Pistachio nut separator densimeter
- -84.28.28.39.90 / Pistachio residue extractor

ABREU



Pioneers in Cooling and Freezing Coil Technologies



Food freshness and safety are critical factors in the food industry, and technological advancement plays a vital role in ensuring these standards. In line with this goal, the National Institute of Industrial Technology (INTI) assists Mar del Plata-based Abreu S.A., a leader in the production of equipment for the fishing industry, in the development of its "girofreezer" preand post-freezing spirals. These spirals have become essential components for maintaining the cold chain. Additionally, this technology enhances production performance by reducing costs and processing times, and optimizes plant space to ensure that products reach consumers in the best condition.

The company has also received advice on optimizing its plant, improving the inventory management system, and enhancing organization, order, and cleanliness.

For over four decades, Abreu S.A. has built its reputation through the quality and durability of its products, including conveyor belts, filleting tables, and crate washers. Today, its reach in the food industry has expanded to offer advanced solutions such as enclosures, container washing machines, and personal hygiene systems.

Guillermo Wyngaard, head of the Department of Management Technologies at INTI's Pampa Region, notes that the company has maintained a close relationship with the Institute for many years. He details that INTI's support enabled the simulation of equipment operating



conditions, facilitating both development and fine-tuning. Currently, this product is present in major international markets.

With the implementation of Intralox's DirectDrive stacking technology, Abreu's spirals not only improve production performance but also increase load capacity and extend belt life. Additionally, they enhance hygiene and optimize plant space. Abreu is the only company in Latin America, outside Brazil and Mexico, that manufactures this equipment. Its commitment to innovation and quality has established it as a leader in its sector.



The global food processing machinery market is projected to register a CAGR of 5.5% during the forecast period from 2022 to 2027.

Source: Mordor Intelligence

"Conceived with the highest quality standards, our spirals are built with components that ensure improvements in production, low maintenance, ease of cleaning, and reduced labor", says José Antonio Abreu, partner at the company. "Furthermore, the spirals are equipped with sensors monitored via the internet, including the conveyor belt tension control module and working temperature sensors".

The limited availability of similar products in Latin America places Abreu in a unique position to encounter potential demand. Through its equipment, designed and manufactured to meet the specific requirements of each client, the firm positions itself as a high-quality supplier and strategic partner for the food industry.

Abreu is well-established both for its 45 years of experience in the market and its strong relationship with Intralox. Its customers receive products that meet their expectations, from design to Factory Acceptance Test (FAT).









Abreu S.A.

Mar del Plata, Buenos Aires, Argentina

Development of high value-added equipment for the food industry: fishing, fruit and vegetable processing, cold storage, poultry, dairy, and bakery.

- -Production plant: 2,200 m²
- -Annual production capacity: 15 units

• HS CODE (NCM):

-8418.69.99 / Spirals for freezing or cooling





MEDELINOX



Leadership in Machinery and Equipment for the Argentinean Caramel Sauce (Dulce de Leche) Industry



The food industry fundamentally relies on stainless steel equipment, a material that ensures maximum hygiene and safety in food production. Due to its resistance to corrosion, ease of cleaning, and ability to withstand temperature changes, stainless steel is the preferred choice for processing and storing food products. These properties not only extend the lifespan of equipment but also prevent contamination, ensuring that food reaches the end consumer in optimal condition.

With over three decades of experience, Medelinox S.A. excels in the manufacture of stainless - steel machinery and equipment, with a focus on the food industry. The company has established itself as a leader in designing and producing equipment for sectors such as chocolate, beer, Argentinean caramel sauce (dulce de leche), and ice cream. Its reputation is built on creating machines and equipment with unique characteristics, capable of adapting to the specific needs of its customers.

Medelinox is currently working to strengthen its presence in the international market by exporting its stand-alone electric baking module, designed to produce Argentinean caramel sauce (dulce de leche) in capacities of 30 or 60 kg. Additionally, it offers steam cookers with production capacities of 150, 300, and 600 kg to reach the diverse needs of its customers.





Regarding the assistance received from the National Institute of Industrial Technology (INTI), Marcelo González, from the Process Development Department of the Food Technology Division, noted Medelinox's participation as one of the dairy equipment suppliers in workshops for the industry. These workshops, organized jointly by the National Institute of Agricultural Technology, the Argentine Chamber of Manufacturers and Suppliers of Equipment, Inputs, and Services for the Dairy Chain, and held in several Latin American countries, have enhanced the visibility of companies like Medelinox and boosted their export capacity.

Leandro Aguilar, representative of INTI's Subproduct Valorization sector, explained that the institution conducted a technical evaluation of an innovative prototype for producing Argentinean caramel sauce (dulce de leche) and made the necessary technological adjustments. This "solar oil preheater" prototype is integrated into the traditional production system to facilitate the evaporation process. It uses a diathermic oil bath and electrical resistances, significantly reducing production time and costs. From an environmental perspective, this advancement contributes to energy savings and promotes the use of alternative energies.

Maximiliano Laurentti, managing partner of the company, emphasized the importance of INTI's assistance, noting that the results of the technical report were crucial for improving and optimizing the equipment. "This support not only increased production efficiency but also adjusted the equipment to the specific needs of the producers". Laurentti also highlighted that participation in international workshops was key to raising Medelinox's profile and increasing its presence in international markets.

With substantial export experience in countries such as Spain, the United Kingdom, the United States, Paraguay, Bolivia, and Uruguay, the company is looking to expand into other strategic markets, including Africa, North America, Brazil, and Europe, due to their high levels of consumption and demand for specialized equipment.









In 2024, Europe accounts for the largest share of the global food processing machinery market.

Source: Mordor Intelligence

The company specializes in offering comprehensive projects, including the development of customized process systems with a high degree of automation and control, integrated with Industry 4.0 technologies. This combination ensures operational flexibility and efficiency, backed by low-cost continuous and remote technical support, which maximizes performance and reduces operating costs.



Medelinox S.A.

El Trébol, Santa Fe. Argentina

Manufacture of stainless - steel machinery and equipment, focused on the food industry.

- -Production plant: 1,400 m²
- -Annual production capacity: 120 units

• HS Code (NCM):

-8419.81.90 / Machines for the production of Argentinean caramel sauce (dulce de leche)



ROLL FOOD ENGINEERING



Technologies for Industrial Scale-Up of the Fruit and Vegetable Sector





The growing global demand for food requires solutions that enable smaller producers to transition toward integrated and sustainable production. In this context, the implementation of multipurpose plants in Latin America has become a key factor in transforming the reality of these producers by adding value at the source and facilitating industrial scaling.

This model not only diversifies crops and promotes agricultural sustainability but also empowers farmers to become entrepreneurs, significantly impacting the rural economy. It enhances the quality of life in local communities and fosters deep changes in the social and economic fabric of the region.

In this challenge, the Mendoza-based company Roll Food Ingeniería has managed to stand out in providing metal-mechanical solutions tailored to the needs of small producers. The company facilitates the transformation of artisanal activities into micro - SMEs, capable of increasing their daily production from 1,000 to 6,000 units.

Roll Food Ingeniería offers two main solutions: the multipurpose production unit, which includes equipment for washing, sorting, milling, refining, concentration, cooking, and pasteurization. This equipment is used to transform raw materials into products such as sauces, jellies, nectars, and jams. It is a compact, efficient system, compatible with renewable energy, and represents an economical and sustainable option for this scale of production.

Another standout product is the thermo-physical peeler for fruits and vegetables, the first of its kind in the world, which operates without caustic soda or chemical additives. It uses steam, pressure, and movement to separate the peel from the fruit. This equipment, which can be configured for any type of fruit and vegetable, offers a comprehensive solution that reduces water consumption and simplifies the peeling process.

Regarding the benefits of this technology, Horacio Campos, partner of the company, explains that currently, the market offers peeling systems on one hand and steam generation on the other, but this equipment integrates both functions. Environmentally, their peeler consumes very little water compared to other plants that use caustic soda and require large amounts of water. Additionally, the same person who controls the peeler also manages the steam system. "In short, it offers a unique and more economical solution by integrating the two technologies", he concludes.

The National Institute of Industrial Technology (INTI) facilitates the relationship between fruit and vegetable producers, and Roll Food Ingeniería, ensuring that the equipment is designed and validated according to the specific needs of the customers. Cristian Ciurletti, head of the Agroindustrial Value Chain department for Cuyo region, points out: "INTI offers comprehensive solutions, from adjusting production process variables to obtaining the finished product, to ensure the effectiveness and efficiency of the equipment".

Gonzalo Bonino, another partner of the company, reaffirms the role of the Technological Institute and adds: "The exchange with INTI provides us with confidence in the validation of the processes for the development of our equipment".

The company has been recognized with the Jóvenes Mendocinos Destacados award in the "Environmental, Economic, and/or Social Sustainability" category, granted by the Consejo Empresario Mendocino (CEM) in 2023, and with the Joven Empresario Mendocino 2024 award from the Federación Económica de Mendoza (FEM).



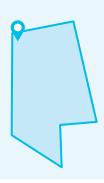




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Roll Food Ingeniería aims to expand its presence with thermo-physical peeling equipment in the Brazilian and Chilean markets, given their significant fruit production. Additionally, the multipurpose unit is an ideal piece of equipment for countries with agricultural regions transitioning from artisanal to industrial scale.

Integrating advanced technology and sustainable practices opens a new horizon for agribusiness in Latin America, where a commitment to quality and efficiency not only improves production but also enriches the lives of those who work the land every day. "This is an opportunity to turn challenges into opportunities and ensure that the future of agricultural production aligns with the values of sustainability and social responsibility", concludes Bonino.



ROLL FOOD S.A.S.

Maipú, Mendoza. Argentina

Manufacture of complete production lines for de food industry

- -Production Plant: 1000 m²
- -Annual production capacity:
- -7 multipurpose line plants
- -4 plants of thermo-physical peeling systems

• HS CODE (NCM):

-84386000 / Machinery and apparatus for fruit or vegetable preparation.



International Cooperation



Hygienic design is critical in the food industry and other sectors where cleanliness and safety are primordial to ensuring food safety. This approach focuses on creating equipment and environments that facilitate cleanliness and minimize the risk of contamination. The importance of hygienic design lies in its ability to ensure product safety, protect consumer health, and comply with sanitary regulations.

EHEDG (European Hygienic Engineering & Design Group) is an organization that promotes hygienic design in the engineering and manufacture of equipment for the food industry. Its objective is to establish guidelines and standards that help manufacturers design products that are easy to clean and reduce the risk of contamination. This not only improves food safety but also optimizes the efficiency of production processes.

The National Institute of Industrial Technology (INTI) plays a crucial role in promoting these practices. Through its representation of EHEDG in Argentina, INTI promotes research and development of technologies that align with the principles of hygienic design. This includes the training of professionals and the dissemination of best practices in the industry, which contributes to raising quality and safety standards in the sector.

EHEDG, with its focus on promoting good practices in the design, construction, and operation of equipment and facilities, and the INTI, with its commitment to innovation and the development of national industries, are important partners in the quest for a safer and more efficient production environment. Together, they can help companies comply with regulations and continuously improve their processes, thus benefiting the entire food supply chain.





















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